



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,255	02/26/2002	Takehiko Nishikawa	219994US0	4102
22850	7590	11/17/2004		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER DICUS, TAMRA	
			ART UNIT 1774	PAPER NUMBER

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/082,255

Applicant(s)

NISHIKAWA ET AL.

Examiner

Tamra L. Dicus

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-5,7-13 and 19-44 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-5,7-13,19 and 21-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10-08-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Acknowledgement is made of Applicant's RCE, IDS, and cancellation of claims 1, 6, and 14.

#### ***Specification Objection***

The disclosure is objected to because of the following informalities: "Backgaround" is misspelled. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear as to the final structure because it is not clear which side of the laminate is the ink-receiving porous sheet laminated on.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Evaluations of level of ordinary skill in the art requires consideration of factors such as various prior art approaches employed, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of

those actively working in the field, commercial success, failure of others, and the inventor's educational level.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this case reasonably reflect this level of skill.

Claims 2, 5, 7-11, and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by WO 01/94124 to Takeda et al.

Takeda teaches an image recording medium (porous sheet laminate) in this order: ink-receptive (22), porous support (21) having gas permeable fine pores, adhesive (23), grooves therebetween release liner (24) further used as a decorative adhesive laminate comprising said image recording medium (see Abstract, page 6, Figure 2, and page 15, lines 24-30). The adhesive is acryl based (page 13, lines 14-20, and page 14, lines 1-5). The ink-receptive layer is comprised of polyolefin (page 8, line 13) base resin. The ink-receptive layer is porous and contains inorganic fine powders, ranging in particle size from 0.3 to 10 microns (page 9, lines 9-15). This teaching at pages 8-9 also meets the range providing for an ink-receiving porous sheet comprising pores having a pore diameter from 0.01 to 10 microns, and 0.05 to 1 microns as per instant claims 9-11. The image recording medium is printed on forming an image printing and then has a transparent-over laminate protective film to cover the image surface to provide a water resistance characteristic (page 3, line 30-page 4, line 2, page 4, line 20, and page 18, lines 5-16) (instant claim 5). The ink-receiving sheet is between 5 to 200 microns thick (page 9, lines 15-21), meeting the range of 10 to 500 and 20 to 300 microns as per instant claims 7-8. The thickness of the adhesive layer is between 20 and 40 microns, falling within Applicant's range of

5 to 100 and 15 to 35 microns per instant claims 17-18 (page 11, line 6). That the groove or irregularity part is to be endowed with a water-passing property is to intended use is afforded little patentable weight. However, because the Applicant's disclosure defines the term "water-passing property" to be that water and/or water vapor are liable to pass through the ink-receiving porous sheet by communicating through holes on page 8, lines 6-10 and on page 11 as the adhesive is to function as having this property. Thus, this property is inherent because the same ink-receiving porous sheet is porous having holes and the adhesive functions in the same way via the adhesive contacting the asperity structure containing grooves as Takeda teaches on page 10. While Takeda teaches the same adhesive, Takeda does not explicitly define a moisture permeability of 3000 or 5000 g/m<sup>2</sup> · 24 hours or more as per instant claims 15-16. The instant application appears to attribute this permeability to the adhesive as a measured property (See Applicant's disclosure on page 14, lines 1-2 and pp. 22-23). "The discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus, the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. In *re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). Because the same adhesive and structure is used, the adhesive layer would have been reasonably expected to result in having such property, absent any evidence to the contrary. The burden is upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

The reference is anticipatory.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 12-13, 21-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/94124 to Takeda et al. in view of USPN 6,331,018 to Roth et al.

The applied Takeda reference does not teach the instant invention with sufficient specificity to constitute anticipation. The Takeda reference does teach in this order: an ink-receiving porous sheet/ porous support/adhesive/grooves/release. As indicated above, Takeda teaches it is known to have a protective/printing on the construction of instant claim 3 used as a decorative adhesive laminate (The image recording medium is printed on forming an image printing and then has a transparent-over laminate protective film (same as protective layer on page 18, 3<sup>rd</sup> paragraph in the instant disclosure) to cover the image surface to provide a water resistance characteristic (page 3, line 30-page 4, line 2, page 4, line 20, and page 18, lines 5-16) per instant claim 21. Also Takeda admits the protective/print/ink-receiving construction is a conventional image medium on page 1, lines 12-15; Figure 1. The ink-receptive layer is comprised of polyolefin (page 8, line 13) base resin. The ink-receptive layer is porous and contains inorganic fine powders, ranging in particle size from 0.3 to 10 microns (page 9, lines 9-15). This teaching at pages 8-9 also meets the range providing for an ink-receiving porous sheet comprising pores having a pore diameter from 0.01 to 10 microns, and 0.05 to 1 microns as per

instant claims 24-26. The image recording medium is printed on forming an image printing and then has a transparent-over laminate protective film to cover the image surface to provide a water resistance characteristic (page 3, line 30-page 4, line 2, page 4, line 20, and page 18, lines 5-16) (instant claim 5). The ink-receiving sheet is between 5 to 200 microns thick (page 9, lines 15-21), meeting the range of 10 to 500 and 20 to 300 microns as per instant claims 22-23. The thickness of the adhesive layer is between 20 and 40 microns, falling within Applicant's range of 5 to 100 and 15 to 35 microns per instant claims 31-32 (page 11, line 2). The reference fails to teach an adhesive comprising silicone base material (instant claim 3) and a release sheet made of paper base (claims 12 & 27) or the release sheet's thickness (claims 13 & 28). The Roth reference teaches a label/decal employing conventional adhesives such as PSAs including adhesives based on silicone resins between a support and release. Roth also teaches release liners made of any suitable material including of paper or coated with a release layer (col. 3, lines 30-35). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Takeda reference in view of the Roth teaching above to employ conventional silicone adhesive resins used in the application of decals or labels for various printing graphics (see col. 5, lines 40-58 of Roth) as the silicone adhesives are interchangeable with acrylics and rubbers conventionally used in PSAs. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Takeda reference in view of the Roth teaching above to include a release of either paper or coated release paper of silicon conventionally used with ink jet printers to have a low adhesion surface (col. 2, lines 50-68 and col. 3, lines 1-5 and 44-46 of Roth). The thickness of the release sheet is not taught (instant claims 13 and 28). However, it would have been obvious to

one of ordinary skill in the art to produce a thickness from 20 to 150 microns, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. Thickness effects the strength.

While Takeda teaches the same adhesive, Takeda does not explicitly define a moisture permeability of 3000 or 5000 g/m<sup>2</sup> · 24 hours or more as per instant claims 29-30. The instant application appears to attribute this permeability to the adhesive as a measured property (See Applicant's disclosure on page 14, lines 1-2 and pp. 22-23). "The discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus, the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). Because the same adhesive and structure is used, the adhesive layer would have been reasonably expected to result in having such property and would have been obvious to one having ordinary skill in the art.

In view of the forgoing, the above claims have failed to be patently distinguishable over prior art.

Claims 4, 19, 33-38, 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/94124 to Takeda et al. in view of USPN 6,605,337 to Mori et al.

The applied Takeda reference does not teach the instant invention with sufficient specificity to constitute anticipation. Because it is not clear as to the claimed layer structure of instant claim 4, the Examiner takes the position that the structure is in the order taught by Takeda



(same as Applicant's Figure 3 in the disclosure). Takeda teaches an image recording medium (porous sheet laminate) in this order: transparent protective film, image printing, porous ink-receptive (22), porous support (21) of polyester film or polyolefin having gas permeable fine pores, adhesive (23), release liner (24) further used as a decorative adhesive laminate comprising said image recording medium (see Abstract, page 6, Figure 2, and page 15, lines 24-30). The adhesive is acryl based (page 13, lines 14-20, and page 14, lines 1-5). See page 3, line 30-page 4, line 2, page 4, line 20, and page 18, lines 5-16 to the teaching where the image recording medium is printed on, forming an image printing, and then has a transparent-over laminate protective film to cover the image surface to provide a water resistance characteristic (instant claim 33). The ink-receptive layer is comprised of polyolefin (page 8, line 13) base resin. The ink-receptive layer is porous and contains inorganic fine powders, ranging in particle size from 0.3 to 10 microns (page 9, lines 9-15). This teaching at pages 8-9 also meets the range providing for an ink-receiving porous sheet comprising pores having a pore diameter from 0.01 to 10 microns, and 0.05 to 1 microns as per instant claims 36-37. The ink-receiving sheet is between 5 to 200 microns thick (page 9, lines 15-21), meeting the range of 10 to 500 and 20 to 300 microns as per instant claims 34-35 and 38.

While the Takeda reference teaches all the essential layers adhered with the adhesive of acryl, it fails to teach an additional adhesive therebetween the ink receiving porous (22) and sheet having pores (21) (instant claim 4), and that the sheet having pores is a nonwoven fabric having a thickness or is foamed having continuous bubbles having a thickness (instant claims 19 and 41-44). Mori teaches such a construction is known and used for recorded images and illumination display signboards. Mori teaches a recording material employing adhesive anchor

Art Unit: 1774

therebetween a porous ink receiving layer and substrate of either cloth or nonwoven fabric which may contain a foaming agent (sheet having pores and foamed sheet having continuous bubbles- as applicant describes on page 15, 3<sup>rd</sup> complete paragraph, that continuous bubbles or holes are formed by using a foaming agent). See abstract, col. 4, lines 55-59, col. 5, lines 45-55, col. 6, line 60, and col. 7, lines 12-23. The porous substrate of Mori is comprised also of polyolefin polypropylene or polyester having inorganic particles in addition to the non-woven fabric or cloth. See col. 5, lines 45-55. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Takeda reference in view of the Mori teaching above to employ adhesive between an ink receiving porous layer and a sheet having pores used in recording images in the application of signboard displays for enhancing the adhesion therebetween as Mori explains at col. 7, lines 19-27. It would have been obvious to one of ordinary skill in the art to have modified the Takeda reference in view of the Mori teaching above to utilize non-woven fabric as instant claims 19 and 41-42 because Mori teaches non-woven fabrics are functionally equivalent to porous sheets such as polyester or polyolefin (col. 5, lines 45-55 of Mori). Further it would have been obvious to modify the thickness of the combination of Takeda and Mori to provide a thickness of the non-woven fabric or foamed sheet having bubbles as instant claims 41-44 because thickness is an optimizable feature as it effects the overall strength and flexibility. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/94124 to Takeda et al. in view of USPN 6,331,018 to Roth et al.

The applied Takeda reference does not teach the instant invention with sufficient specificity to constitute anticipation. Takeda is silent to the composition of the release sheet, that it is made of paper base (claim 39) or the release sheet's thickness (claims 40). The Roth reference teaches a label/decals employing the following construction: release/adhesive/support. Roth also teaches release liners made of any suitable material including of paper or coated with a release layer (col. 3, lines 30-35). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Takeda reference in view of the Roth teaching above to include a release of either paper or coated release paper of silicon conventionally used with ink jet printers to impart a low adhesion surface (col. 2, lines 50-68 and col. 3, lines 1-5 and 44-46 of Roth). It would have been obvious to one of ordinary skill in the art to produce a thickness from 20 to 150 microns as per instant claim 40, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. Thickness effects the strength.

### ***References of Interest***

The remaining references listed on form(s) 892 and/or 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above. USPN 6,165,593 to Brault et al. teaches a recorded element in this order: protective layer/printing layer/ink-receiving porous sheet for removable decals applicable to windows or signs.

*Response to Arguments*

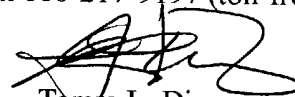
The Applicant's arguments are noted. The prior Office action rejections are withdrawn because the prior art does not teach a concave groove or an irregularity part.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

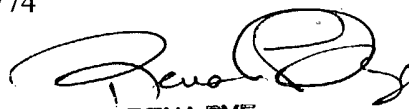
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tamra L. Dicus  
Examiner  
Art Unit 1774

11/10/04



RENA DYE  
SUPERVISORY PATENT EXAMINER  
A.U. 1774 11/15/04